is my high ambition some day to serve within thy temple, O Art! and to add imperfect and faulty, but loving, work to that of the noble army of Artists who still praise thee.

AGRICULTURAL COLLEGE, MANHATTAN, KAN., October, 1872.

METEOROLOGICAL SUMMARY FOR THE YEAR 1872.

By Prof. F. H. Snow, of the Lawrence State University.

Station, Lawrence, Kansas. Latitude 38° 58′; longitude 95° 16′. Elevation of the barometer and thermometers, 884 feet above sea level and 14 feet above the ground; rain gauge on the ground; anemometer 105 feet above the ground, on the dome of the University building.

TEMPERATURE.

Mean temperature of the year, 51.90°, which is 1.23° lower than the mean temperature of the four preceding years. Mean temperature of the winter months, 24.91°; of the spring, 53.21°; of the summer, 70.40°; of the autumn, 51.91°. The winter and spring were each four degrees colder, and the summer and autumn were each less than half a degree cooler than the corresponding seasons in the year 1871.

The mean temperature of the year 1869 was 1.54° lower than that of 1872, but in the former year the winter months were much warmer. and the summer much cooler than in the year just completed.

The mean temperature at 7 A. M., 44.89°; at 2 P. M., 61.14°; at 9 P. M., 94.65°. The highest temperature was 97°, June 26 and August 26; the lowest, 18° below zero, December 20 and 24—giving a range of 115° for the year. The mercury fell below zero on 16 days, January 28, 29, 30 and 31, February 3, 6 and 7, November 29, and December 20 to 27, inclusive. The "cold snap" in December was the severest and longest continued on our record, the mercury on one occasion remaining below zero for 50 consecutive hours. The month of November was even colder than in 1871, the mercury sinking below zero for the first time on record for that month. Winter weather began November 13th, five days earlier than last year, and the Kansas river was closed on the 29th, two days later than last year. The coldest month of the year was December, with mean temperature of 19.93°; the coldest week was in December, (20th to 26th, inclusive,) the mean temperature being only one-twentieth of a degree above

zero, which is 7.91° colder than any previous week recorded; the coldest day was December 24th, the mean temperature being 9° below zero. The 21st, 23d and 24th of December were each colder than the coldest of previous years.

The hottest month was July, mean temperature 77.96°; the hottest week was in August (21st to 27th inclusive), mean temperature 83°; the hottest day was June 26th, mean temperature 85.7°. During the year there were forty-five days on which the mercury reached or exceeded 90°, viz.: Fourteen in June, eleven in July, thirteen in August, five in September, and two in October. The last light frost of spring was April 22d; the first light frost of autumn was September 27th, making the period of entire absence of frost 158 days. It is remarkable that this period is precisely the same, and with the same dates of beginning and ending, as in 1871. The last severe frost of spring was April 1st; the first severe frost of autumn was October 10th, making the interval of absence of severe frost 192 days. No spring or autumn frost did any damage to fruit. The extreme cold of December, however, has undoubtedly killed the peach buds in most localities.

RAIN.

The whole amount of rain, including melted snow, 32.63 inches, which is 2.50 inches less than the average rainfall of the four preceding years. During the year there were 116 days on which either rain or snow fell, a larger number than in any previous year of our record. The longest interval without rain in the growing season, from March 1st to October 1st, was ten days. The number of thunder showers during the year was forty, a greater number than in either of the four preceding years.

SNOW.

The entire depth of snow was 23¼ inches, distributed as follows: January, 1 inch; February, 7¾ inches; March, 3½ inches; December, 11 inches. The last snow flurry of spring was March 24th; the first autumn snow was November 14th, not enough to whiten the ground on the latter date. Snow fell on twenty-five days—four days less than in 1871. The entire amount of snow, as given above, is 6½ inches less than fell in 1871, which was the snowiest year of our record. The average annual snow fall for the five years just completed is 21.6 inches, the least amount being in 1870—9½ inches.

FACE OF THE SKY.

Average cloudiness of the year, 44.28 per cent. of the sky, more than 3 per cent. less than in 1871. The number of clear days in the

year was 168, counting those days clear on which the average cloudiness did not exceed one-third of the sky; the number of half clear days was 93, including under this designation, those days on which between one-third and two-thirds of the sky was covered with clouds; the number of cloudy days was 105, when two-thirds or more was covered. There were thirty-four entirely clear days, without a trace of a cloud; there were only twenty-three entirely cloudy days, without a trace of sky. May was the cloudiest month, when the average cloudiness was 55.27 per cent.; October was the clearest month — the clearest in five years — only 21.40 per cent. of the sky being clouded. The mean cloudiness at 7 A. M. was 47.79 per cent.; at 2 P. M., 48.06 per cent.; at 9 P. M., 36.99 per cent.

WIND.

During the year (three observations daily), the wind was from the south 255 times, northwest 235 times, north 130 times, southwest 116 times, southeast 106 times, east 95 times, northeast 88 times, west 51 times, calm 22 times.

It will be seen that the south winds (including southwest, south and southeast), outnumbered the north winds (including northwest, north and northeast), in ratio of 477 to 453. This preponderance of the south winds has existed in each of our five years of observation. In New England, the north winds largely outnumber the south winds.

Observations upon the velocity of the wind were made during the second half of the year. During the six months, the anemometer on the north dome of the University building, registered 64,828 miles as the entire distance traveled by the wind. This gives an average hourly velocity of 14.68 miles. The average at Philadelphia is 13 miles an hour.

The highest velocity during the six months was 60 miles an hour, from 9 A. M. to 3 P. M., November 14th, on which day the wind traveled 1,050 miles.

BAROMETER.

Mean height of barometer column, 29.112 inches. Mean at 7 A. M., 29.137 inches; at 2 P. M., 29.089 inches; at 9 P. M., 29.111 inches. Maximum height, 29.779 inches, at 9 P. M., November 28; minimum, 28.401 inches, at 2 P. M., April 6; range for the year, 1.378 inches. The highest monthly mean was in December, 29.299 inches; the lowest was in April, 28.999 inches.

RELATIVE HUMIDITY.

Mean for the year, 64.4, that is, the air contained on the average, less than two-thirds the amount of moisture necessary for saturation,

this being a very healthful mean. The mean at 7 A. M. was 75.49; at 2 P. M., 46.72; at 9 P. M., 71.08. There were eleven fogs during the year. October was the dryest month—humidity 53.69; July was the dampest month—humidity 75.2. The least amount of atmospheric moisture observed was at 2 P. M., April 12th, when the relative humidity was only 9.2, less than one-tenth of saturation.

The following table gives the mean temperature, the extremes of temperature and the rainfall for each month of the year 1872 :

Month.	Mean Temperature.	Max'm Temperature.	Min'm Temperature.	Rainfall in Inches.
January	24.35	50.5	—7.5	0.17
February	30.44	61.0	—12.0	0.82
March	37.23	72.0	18.0	2.92
April	56.42	85.0	30.0	4.74
May	65.98	88.0	39.0	5.72
June	76.98	97.0	53.0	1.30
July	77.96	93.5	61.5	6.50
August	77.27	97.0	53.0	4.71
September	66.73	94.0	37 0	2.55
October	55.64	92.0	27.0	1.95
November	33.36	67.0	—1.0	0.01
December	19.93	58.5	—18.0	1.24
Year 1872	*51.90	97.0	—18.0	32.63
Year 1871	54.30	103.0	—6.0	33.23
Year 1870	54.50	102.0	—10.0	31.32
Year 1869	50.36	96.0	—5.0	38.51
Year 1868	53.36	101.0	—16.5	37.48

*The yearly means are not found by dividing the monthly means by twelve, which would be correct if the number of days in each month were the same; but by dividing the sum of all the observations by the actual number of observations (in this case 1,098).